

yet been fully met in Belgium. Despite the success of the policy, adjustments are desirable, especially with respect to the broad definition of cheap medicines. Given the fact that all groups of physicians reached their minimum quota quite easily together with the increased possibility of prescribing cheap medicines due to the entrance of new, generic medicines, the government decided to raise the minimum criteria in 2011.

PHP81

FUNDING SOURCES ANALYSIS RESULTS (REGIONAL AND FEDERAL LEVELS) OF PHARMACEUTICAL MARKETS PER REGIONS OF RUSSIAN FEDERATION

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OBJECTIVES: To analyze state funding sources of drug provision all over RF for the period of 2009-2010. **METHODS:** Different sources of drug funds were summed up during this research. All materials were taken from the open sources: results of auctions of the federal and regional level, orders of the Ministry of Public Health and Social Development, analysis of regional programs of the drug provision and etc. **RESULTS:** Interactive map of the RF was developed due to this analysis of the collected data, it shows information on each region of the RF, the number of privileges people, population of the region, sum of the budget by the ONLS (reimbursement) programs, the sum of the budget according to the regional reimbursement, sum of the hospital budgets, sum of the special programs of the region (if such programs approved in the region), sum of the budget by the program "7 nosologies" (special reimbursement program), with the detailed separation of the budget according to the nosologies. Such map clearly demonstrates difference in the funding system between regions. The ranges of color distinction by regions were put into the map for more convenient usage, it allows visually demonstrate difference in funding on the territory of the RF. Several pilot regions of the RF were chosen where data was validated, this process showed complete conformity of the existing data with the official budgets of the regions. **CONCLUSIONS:** Nowadays this research represents unique product in acceptance of administrative decisions for the administrators of health sector of the RF. Also for the further improvement of the given analytical system it is necessary to adjust the collecting of the corresponding data for 2011 and to analyze the budget of regions on the Federal Health Modernization Program 2011-2012.

PHP82

A STUDY EXPLORATING THE GENERAL PUBLIC PERCEPTIONS TOWARDS MEDICINES

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OBJECTIVES: General public perceptions will affect on their behavior towards medicines. Therefore, this study aims to evaluate the general public perceptions towards medicines in the state of Penang Malaysia. **METHODS:** A cross sectional study using convenience sampling technique was used. Appropriate descriptive and inferential statistics were used to find the differences among the respondents. All data were analyzed at alpha value of 0.05. **RESULTS:** Seven hundred respondents were successfully responded to the survey. More than one third of the respondents 37% stated that they understand what is meant by conventional medicines, whereas 18.6% understand traditional medicines and only 3% understand what is meant by generic medicines. On the other hand, 36% see doctor once they have minor illness and 30% prefer to go to get OTC drugs from the community pharmacy. Furthermore, 62% believe that more expensive drugs are of better quality, and more than 50% believe that advertising affect on their perceived quality of medicines as well as the country of the manufacturer affects on their selection of the drugs. Previous experience, physician's recommendations, pharmacist's recommendations, friend's recommendations, cost of the medicine and medical insurance coverage were the main factors that affect on their perceptions. **CONCLUSIONS:** General public in Penang are very concerning about the medicine chosen. General public education on various types of medicines is important to correct misconceptions and give them the knowledge that they need to make an informed decision. Hence, physicians, pharmacists and other health care providers play vital roles in educating the general public about medicines.

PHP83

THE ECONOMIC BURDEN OF DISEASE RELATED MALNUTRITION IN EUROPE

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OBJECTIVES: Disease related malnutrition (DRM) is a frequent but often unrecognized problem, even in the developed world. The objective of this study was to estimate the burden of disease related malnutrition (BoDRM) in Europe. **METHODS:** An Excel model was developed to estimate direct incremental health care costs and health burden (including increased mortality and reduced quality of life) due to DRM. The monetary value of the health burden was calculated by multiplying the QALY loss with explicit or implicit (2x GDP/capita) cost effectiveness thresholds in each country. Collection of input variables involved a wide spectrum of current data sources: international databases, PubMed, congress abstracts, references from published papers. Ten primary diseases were incorporated into the model: stroke, breast cancer, COPD, dementia, depression, colorectal cancer, musculoskeletal disorders, head and neck cancer, coronary heart disease, chronic pancreatitis. **RESULTS:** For the 835 million European citizens, the direct financial BoDRM is over 31 billion EUR annually. The estimated annual health burden is

approximately 5.7 million life years or 9.1 million QALYs. The total monetary value of the health and financial BoDRM is 306 billion EUR. The health burden in chronic diseases is greater than in acute diseases, and is also greater than the financial burden. In acute diseases, the financial burden is greater than the health burden. **CONCLUSIONS:** In Europe, DRM is a considerable health and financial burden and represents a significant contribution to the total burden of disease, estimated by WHO to be 255 million DALYs annually. Therefore, there is a need to improve nutritional care in all aspects of patient management. The availability of scientific data on DRM is limited, especially regarding the relative mortality risk and quality of life impact. Policy makers should support programmes to extend the clinical and economic evidence base for nutritional care.

PHP84

ASSESSING PRODUCTIVITY AND ACTIVITY IMPAIRMENT DUE TO ILLNESS IN POLAND: EMPLOYEES VERSUS EMPLOYERS VIEW

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OBJECTIVES: The inclusion of lost productivity costs in pharmacoeconomic studies is still a subject of considerable debate. The aim of this study was to quantify the work impairment due to general health status in population of employees and employers (i.e. owners and managers). **METHODS:** Data were obtained from a survey that incorporated the WPAI-GH questionnaire and questions on costs of worker replacement (including hiring and training process). The survey was conducted in cooperation with Employers of Poland – the largest and oldest organisation of employers in Poland in the framework of research grant no N N405 115034 offered by the Ministry of Science and Higher Education of the Republic of Poland. **RESULTS:** The non-representative population comprised 196 subjects in paid jobs (156 employees and 40 employers), 167 of whom were currently employed in government-owned corporations (with 250+ employees). Employees reported 7.4% of work time missed due to health problems (absenteeism) during the past 7 days (0.8% for employers; p=0.052). Impairment while being at work (presenteeism) amounted to 12.2% of total time for employers (5.4% for employers; p<0.05). Percentage of overall work impairment due to health problems for employees and employers were 5.7% vs. 18.3%, respectively (p<0.05). On average more than 50% of overall work impairment was compensated by other employees in the company with a general tendency of a higher compensation of employees' responsibilities. Mean time of hiring and training new worker to achieve 50% of expected productivity was 76 days and 216 days to achieve full productivity. **CONCLUSIONS:** Productivity loss measured by WPAI-GH is higher among employees than employers in analyzed sample in Poland, with a tendency of a higher compensation among employees. Preliminary data suggest that overall work impairment can be completely compensated within a one year from a single employer perspective and support friction cost approach.

PHP85

A SYSTEMATIC REVIEW OF AUTOMATED DOSE DISPENSING IN PRIMARY HEALTH CARE

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OBJECTIVES: An automated dose dispensing (ADD) service is implemented in primary health care in some countries, particularly in the Nordic countries. In this service, regularly used medicines are machine-packed into unit-dose bags for each point of administration. The aim of this study is to review the evidence of the ADD's influence on the appropriateness of medication use, medication safety and costs in the primary health care. **METHODS:** A literature search was performed on the most relevant databases, including the Medline, Embase, and Cochrane Library. An article was included in the review if the study was conducted in primary health care or nursing home settings and medicines were dispensed in unit-dose bags. All study designs were approved and control groups were not required. Studies applying outcome measures that were related to the appropriateness of medication use, medication safety or costs were included. **RESULTS:** Out of 278 abstracts, six studies were found to be acceptable. The prevalences of potential inappropriate drug use (IDU) were higher among ADD users than non-ADD users. After controlling for confounding factors, ADD reduced the probability of long-acting benzodiazepine use among women and drug-drug interactions among women and men. The ADD users aged ≥65-79 years had more problems with potential IDU than older ones (≥80 years). The risk of administration errors was lower if medicines were supplied by the ADD service. The ADD service also reduced discrepancies in the documentation of patient medication records. Any costs were not investigated in the studies. **CONCLUSIONS:** The evidence of the influence of ADD on appropriateness of medication use and medication safety is limited, and missing on costs. The findings of this review suggest that the ADD service may improve medication safety in primary health care, but does not effectively reduce potential IDU.

PHP86

INCORPORATING THE PATIENT PERSPECTIVE INTO THE HEALTH CARE PROCESS: EXPERIENCE FROM THE C.A.T. HEALTH SYSTEM

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OBJECTIVES: To evaluate the feasibility of the C.A.T-Health system (a computerized adaptive test which evaluates generic Health-Related Quality of Life-HRQoL) in a university hospital, at different levels of the health care process. **METHODS:** The C.A.T-Health system has been developed and validated within a 3 years research

project. The system is implemented in software to fill in the test through a touch screen. According to Item-Response Theory, items showed to the respondent are selected from a pool of items based on the answers to the previous questions. The test can vary from 5 to 15 questions. The C.A.T-Health system was installed during 1 week at 3 locations at the Hospital Central de Asturias: Hemodialysis Unit (HDU), Nephrology Hospitalization Unit (NHU) and Nephrology Outpatient Consultancy (NOC). Patients visiting each of these locations were allowed to answer the questionnaire, though they were not asked to do it. The sanitary staff and the patients' relatives were also allowed to answer the test. The percentage of patients who started and finished answering the C.A.T-Health system, the time of completion and the number of items showed were collected. **RESULTS:** 597 subjects started answering the C.A.T-Health system. 366 subjects (61.31%) completed the test: 96 patients, 180 sanitary staff and 80 patients' relatives. The percentage of patients who spontaneously answered the test was 64% and 55%, with respect to the total number of patients visiting HDU and NHU, respectively. The median number of items was 10 (HDU), 9 (NHU) and 8 (NOC). The median time of completion was 118.5 (HDU), 124.9 (NHU) and 113.13 seconds (NOC). The worst C.A.T-Health mean score was that of patients visiting HDU. **CONCLUSIONS:** The C.A.T-Health system is a feasible innovative HRQoL questionnaire which allows the use of patients' perceived health as an outcome variable in the evaluation of the health care process.

PHP87

PATIENT-CENTERED HEALTH CARE DELIVERY SYSTEMS: A DISCRETE CHOICE EXPERIMENT

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OBJECTIVES: Patient-centered care, in which health services are customized on the basis of patients' needs and values, is seen as a critical factor in a high-performance health care system. This project seeks to characterize patients' needs and values for specific features of health care delivery systems. **METHODS:** Quantitative data were obtained by means of a discrete choice experiment (DCE). Alternatives were described by specific attributes that described certain features of a health care delivery system. Each set included six attributes with three specific levels. The DCE was divided into four blocks based on thematic mapping (DCE 1, patient involvement; DCE 2, point of care; DCE 3, personnel; DCE 4, organization). **RESULTS:** In preliminary results, N=663 respondents have completed the survey so far. The feature "out-of-pocket costs" was the most important attribute across all 4 DCEs (DCE 1 coefficient, 0.59025; DCE 2 coefficient, 1.20715; DCE 3 coefficient, 0.99938. DCE 4 coefficient, 0.99079). In DCE 1 regarding patient involvement, "trust and respect" (0.50411) and "attention to personal situation" (0.33664) were of greatest importance. In DCE 2 addressing preferences at the point of care, "shared decision making" (0.77153) and "access to patient record" (0.51370) were nearly equally valuable to patients but of highest relevance. In DCE 3 focusing on personnel in health care delivery systems, "multidisciplinary care" (0.74468) was ranked highest. Lastly, in DCE 4 analyzing features of the organization of health care delivery systems, "travel time" (0.39266), "medical devices and furnishings" (0.41689), and "treatment guidelines" (0.41566) were of almost equal value to patients. **CONCLUSIONS:** The study is intended to close the gap between simplistic representations of patient preferences in today's health care systems and the complexity of actual patient decision-making processes by using the specification and explanatory power of DCEs.

PHP88

SOCIETAL UNMET NEEDS WITHIN SPAIN

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OBJECTIVES: The aim of the current study is to examine how unmet needs, defined as prevalence rates, treatment rates, and quality of life, compare between Spain and other countries in the EU. **METHODS:** Data from the EU National Health and Wellness Survey (NHWS) were used (N=57,805), with respondents from France, Germany, Italy, Spain, and UK ("5EU"). NHWS is an internet-based survey which relies on a random stratified sampling framework to ensure demographic representativeness of each country. Among the 10 most prevalent conditions in 5EU, differences in prevalence, treatment rates, and health utilities (using the SF-6D) were compared between 5EU and Spain (N=5,039). **RESULTS:** Prevalence rates were lower in Spain for 7 of the 10 conditions investigated. Despite the lower prevalence rates, treatment rates for these conditions were consistently higher. The single exception was dyslipidemia, which was more prevalent in Spain (24.2% vs. 14.7%) and had a lower treatment rate (50.7% vs. 56.0%) than elsewhere in 5EU. Stronger beliefs in seeing their physician and in prescription medications were also reported by Spanish patients relative to elsewhere in 5EU. The greatest unmet needs in Spain, defined as high prevalence estimates and low treatment rates and health utilities, were reported for patients with insomnia/sleep difficulties (Prevalence=27.6%, Treatment rate=31.4%, Utilities=0.67) and anxiety (Prevalence=23.3%, Treatment rate=41.2%, Utilities=0.62). **CONCLUSIONS:** The results suggest prevalence rates are generally lower in Spain than the rest of 5EU though treatment rates are higher. The latter finding could be due to a greater belief in regular contact with physicians and prescription medications in general. Nevertheless, several unmet needs exist for Spanish patients, particularly for insomnia/sleep difficulties and anxiety.

PHP89

DETECTION OF MEDICATION ERRORS IN THE THAI FDA DATABASE OF ADVERSE DRUG REACTIONS REPORTS

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OBJECTIVES: Preventable adverse drug reactions (ADRs) are some of the most common consequences of medication errors (MEs). Database of ADR reports can provide information on wide range of different adverse events and other medication related problems including MEs. The aim of this study was to identify MEs from ADR reports in the Thai Food and Drug Administration (Thai FDA) database. **METHODS:** ADR reports of Statin drugs in the Thai FDA database between 1993 and 2009 were retrospectively analyzed. Reports were assessed for identifying MEs regarding type of MEs that caused ADR and the subsequent adverse outcome. **RESULTS:** Of the 1682 reports assessed, 74 reports (4.40%) were identified as MEs that caused ADR. Regarding the type of MEs, most of them were related to failure to adjust for drug-drug interaction (86.5%) following by overdose (13.5%). Among 74 ADRs resulting from MEs, 49 (66%) were serious outcomes and 25 (34%) were considered as non serious outcomes. **CONCLUSIONS:** Analysis of ADR database identified circumstances that are most prone to errors. This capacity can contribute to the detection and prevention of medication related problems, therefore enhance patient safety.

PHP90

THE REFORM OF THE COMMUNITY PHARMACY IN ITALY BETWEEN NEW ROLE AND MANAGERIALISM

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OBJECTIVES: In Italy the role of community pharmacies is changing. The reform the country is undertaking aims at designing a community pharmacy delivering a number of services and highly involved in the health system. Consequently, new skills and knowledge are required for the pharmacists to be successful regard both the health objectives and the economic ones. The aim of the paper is to analyze a) the perceptions of the pharmacists toward the new context defined by the recent reform, and b) their attitude to play the changing agent role. Thus, the ability of the pharmacists to have a strategic orientation, the nature of its information system, and the his/her knowledge of the context will be investigated. **METHODS:** A survey has been designed, and a questionnaire submitted to a national sample of 500 community pharmacies. The questionnaire was organized in 4 sections: the general profile and training; his/her perception of the role played; the strategic orientation; the pharmacy information system. Answers were graded according to the Likert scale 1-7. The response rate was 32%. **RESULTS:** Data highlight how the pharmacies are already challenging the changing context offering a range of services: prevention campaign (71.8%), booking diagnostic exams and specialists' visits (50.9%), participation to health education programs (49%). However, the strategic attitude of respondents is not very high (m=4.90). Pharmacies deliver a range of services to improve customers fidelity, and their image toward the community. It has not been detected a correlation between range of services delivered and profit targets. Pharmacies have a good control of the global financial results, but a poor ability to monitor partials results. **CONCLUSIONS:** Pharmacies know the new model of pharmacy the government is introducing, however it doesn't seem they have the right background and attitudes to challenge the new context.

PHP91

PATIENT SAFETY ACTIVITIES ASSOCIATED WITH HOSPITAL PHARMACY IN A NATIONWIDE SURVEY ON MANAGEMENT SYSTEM FOR PATIENT SAFETY

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OBJECTIVES: A business hours study by pharmacy practice was examined as a part of patient safety activities associated with hospital pharmacy. **METHODS:** We surveyed nationwide the situation of patient safety activities in hospitals allowed for additional costs on patient safety measures under the social insurance medical fee schedule. Of targeted 2674 hospitals (all hospitals: 8706 as of June 1) in Japan, 669 hospitals responded (response rate: 25.0%). Pharmacy practice includes medication teaching and history administration, brought drugs review on admission, drug adjustment and dispense, question reference from out-of-hospital pharmacy, drug information for safety use. **RESULTS:** We classified 669 hospitals into three classes; additional cost I (85 points) implementing hospitals with more than 401 beds (A group: 173 hospitals), additional cost I (85 points) implementing additional cost I with less than 400 beds (B group: 306 hospitals), and additional cost II (35 points) implementing hospitals (C group: 180 hospitals). The time spent for medication teaching and history administration was 20.6% of all pharmacy practices in A group, 20.4% in B group, and 18.1% in C group. Similarly, the time for brought drugs review was 6.6% in A group, 8.2% in B, and 7.5% in C, and the time for drug adjustment and dispense of anti-neoplastic drugs was 9.4% in A, 5.9% in B, and 1.9% in C. The time for question reference from out-of-hospital pharmacy was 2.9% in A, 4.3% in B, and 4.6% in C. **CONCLUSIONS:** The time for medication teaching and history administration, and drug adjustment and dispense of neo-plastic drug and IVH were spent much more time at large scale hospitals like A group hospitals than at small scale hospitals like C group hospitals.

PHP92

LACK OF CLINICAL EFFICACY AS A MAIN REASON FOR AHTAPOL NEGATIVE RECOMMENDATIONS FOR ORPHAN ONCOLOGY DRUGS

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OBJECTIVES: The objective of this study is to verify if the clinical efficacy is the main reason on which negative recommendations issued by AHTAPol (Agency for